

SPECIFICATIONS

Digital Indicator

CSD-531

SPEC.No.EN382531-E

1/4

1. General

The instrument is a digital indicator with 50 dots bar meter display for the purpose of instrumentation.

2. Specifications

2-1. Specifications for analog

- Bridge power supply DC5 V \pm 0.25 V within 60 mA (DC2.5 V changeable)
- Applicable transducers
 - At DC5 V Up to 2 pieces of strain gage applied transducers(350) can be connectable.
 - At DC2.5 V Up to 4 pieces of strain gage applied transducers(350) can be connectable.
- Input range F.S. setting can be made with the input of \pm 0.4 mV/V to \pm 3.1 mV/V (At the time of bridge power supply is DC5 V)
- Output range DC4 mA to 20 mA(at the time of bridge power supply is 0.4 mV/V)
Load resistance 260 or less
- Output rate 4 times/s, 20 times/s or 50 times/s changeable
(Synchronized with display rate)
- Zero adjustment range \pm 2.4 mV/V
- Non-linearity 0.1 %F.S.
- Temperature efficient
 - Zero point \pm 0.5 μ V/ (Input conversion, at the time of F.S. setting with the input from 0.6 mV/V to 3.1 mV/V)
 - Sensitivity \pm 0.02 %F.S./ (Input conversion, at the time of F.S. setting with the input from 0.6 mV/V to 3.1 mV/V)
- Input noise \pm 0.6 μ V_{P-P} or less
(at the default setting for digital filter and stabilized filter.)
- A/D sampling 100 times/s
- CHECK Approx.0.3 mV/V
(Setting can be provided at the intervals of approx.0.1 mV/V with the range from approx.0.1 mV/V to approx.1.5 mV/V)
Suitable extension cable is Minebea's standard cable CAB-502(4-cores) within 30 m.
Not applicable when Zener barrier is used.

2-2. Specifications for digital

- Load display
 - Display range - 9 999 to + 9 999 (\times 2, \times 5 or \times 10 available)
 - Display Red 7 segment LED, character's height 10.2 mm
 - Over display " - OL" display when minus over and "OL" display when plus over.
- Status display HOLD, CHECK
- Set display Red 7 segment LED, S1 and S2, each 4 digit, character's height 8 mm
- Judgement display S0, S1, S2,
- Bar meter display Red or Green 50 dots bar meter displays the ratio of the current load value comparing with the maximum display value, or the ratio of the set value of the comparator S1 or S2 comparing with the maximum display value.
- Display rate 4 times/s (20 times/s or 50 times/s changeable)
- Decimal point display No display, 10¹, 10² or 10³ changeable

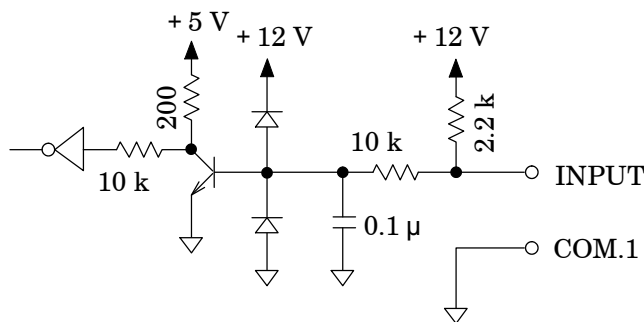
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2-3. Function of sheet key switch on front panel

S1/◀	S1 set display/set value carry
S2/	S2 set display/set value increment
ZERO	Zero set
FUNC.	Changeover of function mode
CHECK	ON/OFF of check value
ENTER	Enter key

2-4. External control function

- ZERO Same as ZERO key
Above is pulse input, and it is effective once when the pulse width is 100 ms or more.
- HOLD Hold of display, comparative output and analog output.
Above is level input, and it is effective when short is made for 100 ms or more.

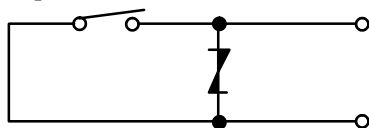


2-5. Comparator function

- Set value - 9 999 to + 9 999
- Number of settings 2 points of S1 and S2
- Set value of hysteresis data 0 to 99 digits
- Set time width of hysteresis 0 to 9.9 s
- Direction of hysteresis Selectable from “On delay” or “Off delay”
- Converting rate of comparator 4 times/s, 20 times/s or 50 times/s changeable
(Synchronous with display rate)

2-6. Contact output signal

- S1、S2 Output the contact when less than/or more than the comparator set value is obtained.
- S0 Short of contact at the time of whichever condition as follows is set.
 - When the condition is full(100 % of rated load)
 - When the load is between the set value of S1 and S2
- Specification of contact 1a contact
AC125 V 3 A(load resistance)
DC30 V 3 A(load resistance)
Equivalent circuit of contact output section



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2-7. Various kinds of functions

- Digital filter Stabilizes the data through operation process inside of CPU.
- Stabilized filter Strengthens/stabilizes the digital filter only when load variation width is within the constant range.
- Change of targets for load display
By the combination of "Load display", "Bar meter display", "Comparator" and "Analog output", target of HOLD can be made.
- Key lock Prohibits the optional key operation
- Selection of "Bar meter + display mode" or "Bar meter +/- display mode"
- Light ON/OFF of bar meter display
- Selection of the color of bar meter display
- Lights ON/OFF of setting display of comparator

3. Overall specifications

- Operating temperature/humidity range
 - Temperature 0 to 50
 - Humidity 85 %RH or less (Non condensing)
- Power supply voltage AC100 V to AC240 V
(Permitted changeable range : AC85 V to AC264 V)
- Power supply frequency 50/60 Hz
- Power consumption Approx.16 VA (at AC100 V)
Approx.23 VA at maximum. (at AC100 V to AC240 V)
- Insulation resistance 100 M or more at DC500 V (between AC power supply ↔ GND)
- Withstand voltage 1 500 V for 1 min (between AC power supply ↔ GND)
- Outline dimension (W)110 mm × (H)110 mm × (D)205 mm (excludes protruding parts)
- Weight Approx.1.4 kg (without any option)

4. Standard specifications at the shipment

- Bridge power supply DC5 V
- Span adjustment 2 000 display at the input of ± 0.6 mV/V
- The minimum scale 1
- Decimal point Non

5. Accessories

- Instruction manual 1 piece
- Midget fuse (5 A) 1 piece
- Seal for unit 1 piece
- Panel packing 1 piece
- M5 Nut 4 pieces
- M5 Flat washer (Large) 4 pieces
- M5 spring washer 4 pieces

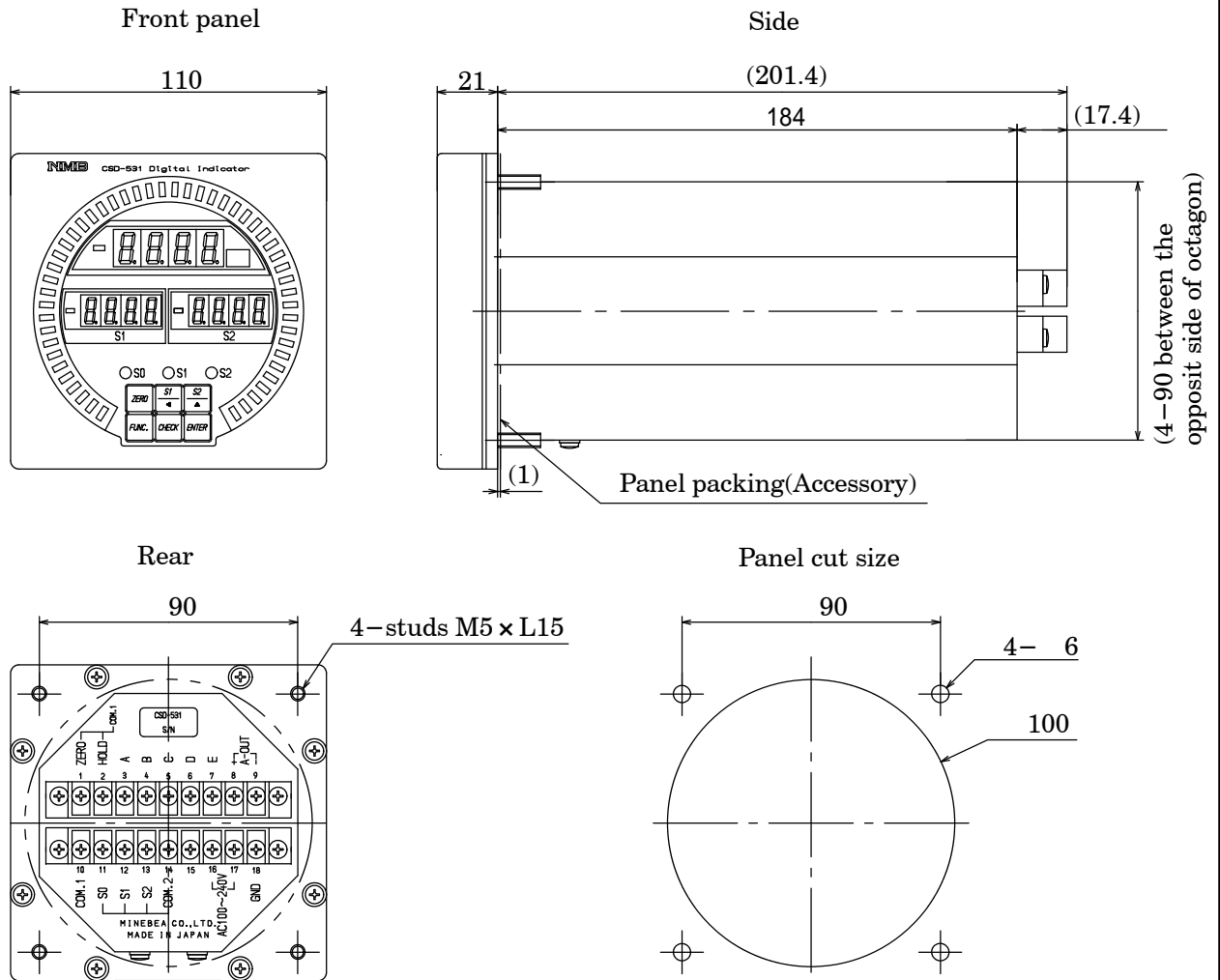
6. Options

6-1. Voltage output

- P/N CSD531-P29
- Specifications
 - Output DC - 10 V to 10 V Load resistance 5 k or more
 - Non-linearity 0.1 %F.S.

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7. Outline dimension



Unit : mm

Specifications and outline dimensions and so on which have printed may subject to change for the purpose of improvement without notice.